What is Claimed:

1. A computer system comprising:

    a data store comprising a plurality of objects, each object having an associated type, each type having an identifier; and

    a hardware / software interface system for manipulating the plurality of objects.

2. The computer system of claim 1, wherein each type is a user-defined type (UDT).

3. The computer system of claim 1, wherein a type can be a subtype of another type.

4. The computer system of claim 1, wherein the data store further comprises a type path for each object.

5. The computer system of claim 4, wherein the data store comprises a computed column for storing each type path.

6. The computer system of claim 4, wherein each type path comprises a variable-length encoded value.

7. The computer system of claim 6, wherein each variable-length encoded value corresponds to a hierarchy level of the type of the associated object.

8. A hardware / software interface system capable of manipulating a plurality of objects, each object having an associated type, each type having an identifier.

9. The hardware / software interface system of claim 8, wherein each type is a user-defined type (UDT).

10. The hardware / software interface system of claim 8, wherein a type can be a subtype of another type.

11. The hardware / software interface system of claim 8, wherein each object has an associated type path.

12. The hardware / software interface system of claim 11, wherein each type path belongs to a computed column in data store.

13. The hardware / software interface system of claim 11, wherein each type path comprises a variable-length encoded value.

14. The hardware / software interface system of claim 13, wherein each variable-length encoded value corresponds to a hierarchy level of the type of the associated object.

15. A computer-readable medium having stored thereon a data structure, comprising:

        a first data field containing an object; and

        a second data field containing a data type associated with the object, the data type having an identifier.

16. The computer-readable medium of claim 15, wherein the type is a user-defined type (UDT).

17. The computer-readable medium of claim 15, wherein the type can be a subtype of another type.

18. The computer-readable medium of claim 15, further comprising a third data field containing a type path for the object.

19. The computer-readable medium of claim 18, wherein the type path comprises a variable-length encoded value.

20. The computer-readable medium of claim 19, wherein the variable-length encoded value is derived from the data type.

21. A method of generating a selectivity estimate of a query over a plurality of objects, each object having a type with identifier, comprising:

encoding each object with a type path derived from the identifier;

for each object, determining if its type path will satisfy the query; and

determining the ratio of objects having a type path that will satisfy the query to the total number of objects.

22. The method of claim 21, further comprising receiving the query and determining which type paths will satisfy the query.

23. The method of claim 21, further comprising encoding the query so that the query has a type that can be satisfied.

24. The method of claim 21, further comprising creating a histogram using the encoded objects.